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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,296	12/09/2003	Christopher B. Reynolds	BUR920030102US1 (IBU-10-5)	3650
26681	7590	02/28/2005	EXAMINER	
DRIGGS, LUCAS BRUBAKER & HOGG CO. L.P.A. DEPT. IEN 8522 EAST AVENUE MENTOR, OH 44060			LOKE, STEVEN HO YIN	
			ART UNIT	PAPER NUMBER
			2811	

DATE MAILED: 02/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/731,296

Applicant(s)

REYNOLDS ET AL.

Examiner

Steven Loke

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 21-23 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7 and 9-12 is/are allowed.
- 6) ☒ Claim(s) 1-6, 8 and 13-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/9/03</u> . | 6) <input type="checkbox"/> Other: _____ |

1. Applicant's election without traverse of claims 1-20 in the reply filed on 11/30/04 is acknowledged.
2. Claims 21-23 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 11/30/04.
3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 200 (page 9, line 20). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
4. The disclosure is objected to because of the following informalities: What are LEF (page 11, line 7) and GDS (page 11, line 13) stand for?

Appropriate correction is required.
5. Claims 2-6, 8 and 13-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2, line 2, the phrase "densely obstructed macro" is unclear as to what is it meant. Are the circuits in the macro blocking the wiring channels?

Claim 4, line 2, the phrase "its functionality" is unclear whether it is being referred to the functionality of the slice.

Claim 8, line 3, claim 16, line 1, the word "mass" is unclear as to what is it being referred to.

Claim 13, line 5, it is unclear what are intended to pass through the macro. Are the channels intended to pass through the macro?

Claim 13, line 5, the phrase "at each location" is unclear as to what location is it being referred to.

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Schulz et al. (EP 0 271 596 A1 in the IDS filed on 12/9/03).

In regards to claim 1, Schulz et al. show all the elements of the claimed invention in fig. 4. It is a semiconductor chip containing an embedded macro (A-H, J-K), said macro containing a plurality of slices (A-H, J-K) extending therethrough, wherein each slice has its own porosity factor representing the number of open channels extending through the slice (col. 5, lines 14-16), each channel containing a circuit wire (global wire) passing through the slice for delivery of signals within the chip.

In regards to claim 2, Schulz et al. further show the embedded macro is a densely obstructed macro because there are circuits formed all over the partitions (A-H, J-K).

In regards to claim 3, Schulz et al. further show the macro is a field programmable gate array because there are thousands of logic gates formed in the partitions (A-H, J-K).

8. Claims 7 and 9-12 are allowed.

9. The following is a statement of reasons for the indication of allowable subject matter: The major difference in the claims not found in the prior art of record is the steps of (a) developing a chip floor plan including early timing allocation and proposed array placement; (b) flagging critical logical wiring nets and overlaying the floorplan with the nets; (c) making an initial selection of slices for the macro based upon the number of channels required at each location within macro; and (d) assembling the macro with the placement of slices to provide porosities based upon the channel requirements.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Loke whose telephone number is (571) 272-1657. The examiner can normally be reached on 7:50 am to 5:20 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lee can be reached on (571) 272-1732. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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February 21, 2005

Steven Loke
Primary Examiner

